

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A printing apparatus as set forth in claim 2, wherein:

the first sensor detects regular reflection light from said medium; and

the second sensor is provided separately from said first sensor, and detects diffuse reflection light from said medium.

2. (currently amended): A printing apparatus, comprising:

a transport unit that transports a medium in a transporting direction;

a head that performs recording on a medium using ink and that moves in a moving direction;

a first sensor that moves in said moving direction together with said head and that detects an edge of said medium; and

a second sensor that moves in said moving direction together with said head and that detects a pattern formed on said medium by said head;

wherein:

said first sensor is provided further upstream with regard to said transporting direction than said second sensor,

~~said head has a plurality of nozzles,~~

~~a plurality of block patterns are formed on said medium lined up in a straight line
in said moving direction,~~

~~each of said plurality of block patterns is respectively formed by a different
nozzle, and~~

~~said second sensor detects said plurality of block patterns that are lined up in said
moving direction while said second sensor moves once in said moving direction.~~

said head has a plurality of colored-liquid nozzles that eject a colored liquid and a
plurality of colorless-liquid nozzles that eject a colorless liquid,

each of said plurality of colored-liquid nozzles respectively forms a colored block
pattern on said medium,

a plurality of the colored block patterns are formed on said medium lined up in a
straight line in said moving direction and leaving no space between the colored block
patterns adjacent to one another, said plurality of the colored block patterns constituting a
group of tested colored block patterns to be subjected to testing,

said second sensor detects said tested colored block patterns that are lined up in
said moving direction while moving once in said moving direction in order to test
whether there is a colored-liquid nozzle that has not ejected said colored liquid,

said group of tested colored block patterns is surrounded by a non-tested pattern
that is not subjected to testing by said second sensor,

each of said plurality of colorless-liquid nozzles respectively forms a colorless
block pattern on said medium,

a plurality of the colorless block patterns are formed on said medium lined up in a straight line in said moving direction and leaving a space between the colorless block patterns adjacent to one another,

said plurality of colored-liquid nozzles apply said colored liquid onto said plurality of the colorless block patterns, and

said second sensor detects, while moving once in said moving direction, a degree of smearing of said colored liquid at a position where said colorless block pattern is to be formed in order to detect whether there is a colorless-liquid nozzle that has not ejected said colorless liquid.

3 - 4. (canceled).

5. (previously presented): A printing apparatus according to claim 34, wherein said light-emitting section and said light-receiving section of said first sensor are arranged in said transporting direction ; and

said light-emitting section and said light-receiving section of said second sensor are arranged in said moving direction.

6 - 7. (canceled).

8. (original): A printing apparatus according to claim 2, wherein said first sensor includes a light-emitting section and a light-receiving section; said light-emitting section of said first sensor irradiates light onto said medium; and

said light-receiving section of said first sensor receives regular reflection light from said medium.

9. (original): A printing apparatus according to claim 2, wherein
said second sensor includes a light-emitting section and a light-receiving section;
said light-emitting section of said second sensor irradiates light onto said medium; and
said light-receiving section of said second sensor receives diffuse reflection light from
said medium.

10-16. (canceled).

17. (previously presented): A printing apparatus according to claim 1, wherein
said head can eject said ink while moving in a forward pass and in a return pass; and
locations at which ink is to be ejected from said head are determined in accordance with
the detection result of said second sensor.

18. (previously presented): A printing apparatus according to claim 1, wherein the
type of said medium is detected from the detection result of said first sensor and the detection
result of said second sensor.

19. (original): A printing apparatus according to claim 18, wherein said head
performs the recording on said medium in accordance with the type of said medium.

20 - 21. (canceled).

22. (previously presented): A printing system as set forth in claim 23, wherein:
the first sensor detects regular reflection light from said medium; and
the second sensor is provided separately from said first sensor, and detects diffuse
reflection light from said medium.

23. (currently amended): A printing system comprising:
a computer; and
a printing apparatus,
said printing apparatus including:
a transport unit that transports a medium in a transporting direction;
a head that performs recording on a medium using ink and that moves in a
moving direction;
a first sensor that moves in said moving direction together with said head and that
detects an edge of said medium; and
a second sensor that moves in said moving direction together with said head and
that detects a pattern formed on said medium by said head;
wherein:
said first sensor is provided further upstream with regard to said transporting
direction than said second sensor,
~~said head has a plurality of nozzles,~~

~~a plurality of block patterns are formed on said medium lined up in a straight line
in said moving direction,~~

~~each of the plurality of block patterns is respectively formed by a different nozzle,
and~~

~~said second sensor detects said plurality of block patterns that are lined up in said
moving direction while said second sensor moves once in said moving direction.~~

said head has a plurality of colored-liquid nozzles that eject a colored liquid and a
plurality of colorless-liquid nozzles that eject a colorless liquid,

each of said plurality of colored-liquid nozzles respectively forms a colored block
pattern on said medium,

a plurality of the colored block patterns are formed on said medium lined up in a
straight line in said moving direction and leaving no space between the colored block
patterns adjacent to one another, said plurality of the colored block patterns constituting a
group of tested colored block patterns to be subjected to testing,

said second sensor detects said tested colored block patterns that are lined up in
said moving direction while moving once in said moving direction in order to test
whether there is a colored-liquid nozzle that has not ejected said colored liquid,

said group of tested colored block patterns is surrounded by a non-tested pattern
that is not subjected to testing by said second sensor,

each of said plurality of colorless-liquid nozzles respectively forms a colorless
block pattern on said medium,

a plurality of the colorless block patterns are formed on said medium lined up in a straight line in said moving direction and leaving a space between the colorless block patterns adjacent to one another,

said plurality of colored-liquid nozzles apply said colored liquid onto said plurality of the colorless block patterns, and

said second sensor detects, while moving once in said moving direction, a degree of smearing of said colored liquid at a position where said colorless block pattern is to be formed in order to detect whether there is a colorless-liquid nozzle that has not ejected said colorless liquid.

24. (previously presented): A printing apparatus according to claim 2, wherein said transport unit is controlled in accordance with the detection result of said first sensor.

25. (previously presented): A printing apparatus according to claim 2, wherein said head is controlled in accordance with the detection result of said first sensor.

26. (previously presented): A printing apparatus according to claim 2, wherein said first sensor detects a lateral edge of said medium; and
a region onto which ink is to be ejected from said head is determined in accordance with the result of detecting said lateral edge.

27. (previously presented): A printing apparatus according to claim 2, wherein said first sensor detects an upper edge of said medium; and

said transport unit transports said medium to a print start position in accordance with the result of detecting said upper edge.

28. (previously presented): A printing apparatus according to claim 2, wherein said first sensor detects a lower edge of said medium; and a region onto which ink is to be ejected from said head is determined in accordance with the result of detecting said lower edge.

29. (previously presented): A printing apparatus according to claim 2, wherein an ejection test of said head is performed in accordance with the result of detecting said pattern with said second sensor.

30. (previously presented): A printing apparatus according to claim 2, wherein said head can eject said ink while moving in a forward pass and in a return pass; and locations at which ink is to be ejected from said head are determined in accordance with the detection result of said second sensor.

31. (previously presented): A printing apparatus according to claim 2, wherein the type of said medium is detected from the detection result of said first sensor and the detection result of said second sensor.

32. (previously presented): A printing apparatus according to claim 29, wherein said transport unit is controlled in accordance with the detection result of said first sensor.

33. (previously presented): A printing apparatus according to claim 31, wherein said head performs the recording on said medium in accordance with the type of said medium.

34. (previously presented): The printing apparatus according to claim 1, wherein:
said first sensor includes a light-emitting section and a light-receiving section;
said second sensor includes a light-emitting section and a light-receiving section; and
a direction in which said light-emitting section and said light-receiving section of said first sensor are arranged is different from a direction in which said light-emitting section and said light-receiving section of said second sensor are arranged.